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REMARKS

Claims 4 and 13 have been amended to correct the indicia for step (e) to correspond to the antecedents in previously amended Claims 1 and 10.

Claims 1-18 are pending in the application.

By way of this response, Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain any outstanding issues that require adverse action, it is respectfully requested that the examiner telephone Timothy R. Croll at (408)433-7625 so that such issues may be resolved as expeditiously as possible.

Response to the rejection under 35 U.S.C. § 103

Claims 1-3, 5-12, and 14-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang, et al., U.S. Patent Application No. 2004/0015803 (*Huang*) in view of Nadeau-Dostie et al., U.S. Patent No. 6,457,161 (*Nadeau*). Applicant respectfully traverses the rejection as follows.

Claims 1 and 10 recite a series of steps (a) through (g) for grouping cells for scan testing. In paragraph [0024] cited by the rejection, *Huang* teaches: "The scan cells are partitioned into subgroups based upon source clock roots of their respective triggering clock edges." However, *Huang* does not teach or suggest specific steps used to partition the scan cells into subgroups. Consequently, the rejection errs on page 2, section 5, in alleging that *Huang* discloses the claimed series of specific steps. For example, *Huang* does not teach or suggest the claimed step of (b) initializing a corresponding list of cells for a common signal domain. As defined in lines 1-3 on page 10 of the specification,

initializing a corresponding list of cells is defined as creating the corresponding list of cells as an empty list. The rejection cites support for the allegation that *Huang* discloses the claimed step of initializing a corresponding list of cells by identifying the netlist in *Huang* as the claimed corresponding list of cells. However, the rejection admits that the netlist is "received from a design database". Because the netlist is received from a design database and is not created as an empty list in *Huang* for partitioning the cells into subgroups, *Huang* does not initialize the netlist to partition scan cells into subgroups. Because *Huang* does not teach initializing the netlist to partition scan cells into subgroups, the rejection fails to arrive at the claimed invention.

The rejection further errs in alleging that *Huang* teaches the claimed step of (c) selecting a cell belonging to a common signal domain that is not included in a corresponding list of cells. The rejection cites support for the allegation by identifying the subgroups in *Huang* as the claimed corresponding list of cells. However, identifying *Huang*'s subgroups as the claimed corresponding list of cells contradicts the previous identification of *Huang*'s netlist as the claimed corresponding list of cells. Because the rejection contradicts itself in identifying different elements in *Huang* as the claimed list of cells, the rejection fails to arrive at the claimed invention. Further, there is no teaching or suggestion in *Huang* of selecting a scan cell belonging to a common signal domain that is not included in a corresponding list of cells as alleged by the rejection.

The rejection further errs in alleging that *Huang* teaches the claimed step of (e) inserting the selected cell in the corresponding list of cells for the common signal domain

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associated with the signal driver. Again, the rejection contradicts itself. Specifically, the rejection admits that *Huang* does not disclose step (d). However, step (e) recites the signal driver that is first recited in step (d). Because *Huang* does not disclose step (d), *Huang* does not disclose the signal driver recited in step (e). Because *Huang* does not disclose the signal driver in step (e), *Huang* does not disclose step (e). Because *Huang* does not disclose step (e), the rejection fails to arrive at the claimed invention.

On page 7, section 16, the rejection acknowledges Applicant's argument that *Huang* does not teach or suggest steps (c) and (e). To refute Applicant's argument, the rejection argues in section 17 that *Huang* must teach step (c) for step (e) to exist. In other words, the rejection assumes that *Huang* teaches step (e) to argue that *Huang* teaches step (c). Clearly, the rejection relies on circular reasoning, that is, the rejection assumes that *Huang* teaches step (e) to argue that *Huang* teaches step (c). However, the rejection must show that *Huang* teaches or suggests both step (c) and step (e). Because the rejection assumes what the rejection is attempting to prove, the reasoning is invalid. Because the rejection relies on invalid reasoning to argue that *Huang* teaches or suggests both step (c) and step (e), the rejection fails to meet the burden required under a rejection under 35 U.S.C. § 103.

The rejection further errs in alleging on page 8, section 19, that in Amendment "A" Applicant had asserted that the claimed lists are necessary to achieve partitioning. In fact, Applicant stated the following: "However, there is no teaching or suggestion in *Huang* that the claimed lists are necessary to achieve the partitioning described in paragraph [0024]." The point of Applicant's statement is that the

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partitioning of cells into subgroups according to clock roots in *Huang* does not require the claimed lists as alleged by the rejection. In other words, the partitioning in *Huang* may be performed without the claimed lists. For example, each cell in the netlist in *Huang* could be traced to its clock root and marked in the netlist with its clock driver without ever creating a list. Each subgroup in *Huang* could be identified simply as the cells that are marked with the same clock driver, again without ever creating a list. The allegation that *Huang* requires the creation of the claimed list to partition cells into subgroups according to clock roots is clearly untrue, and any rejection based on such an allegation cannot reasonably be sustained.

The rejection further errs on page 3, section 5, in alleging that one of ordinary skill in the art would have been motivated at the time of the invention to modify *Huang* by the tracing module of *Nadeau* to identify scan cells for selection and insertion into lists. However, as explained above, *Huang* lacks steps (c) and (e) that specifically recite selecting a cell belonging to a common signal domain that is not included in a corresponding list of cells for a common signal domain and inserting the selected cell in the corresponding list of cells for the common signal domain associated with the signal driver. Because *Huang* lacks steps (c) and (e), the proposed modification of *Huang* by *Nadeau* fails to arrive at the claimed invention. Further, there is no motivation to modify *Huang* by *Nadeau* as proposed by the rejection, because the alleged advantages for making the proposed modification argued in the rejection are identical to the claimed steps (c) and (e) alleged by the rejection to be disclosed in *Huang*. Specifically, the rejection argues that the proposed modification "would provide for the necessary identification

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of the scan cells for selection and further insertion into the lists ...". If *Huang* already included steps (c) and (e), then there would be no advantage to making a modification that provides for these same steps. Because there is no motivation to modify *Huang* by *Nadeau* as proposed by the rejection, the rejection fails to arrive at the claimed invention. Further, the rejection relies solely on hindsight gained from Applicant's disclosure by citing the claimed steps as motivation for making the proposed modification. Because the rejection relies solely on hindsight gained from Applicant's disclosure, the rejection fails to show motivation in the prior art for making the proposed modification as required to support a rejection under 35 U.S.C. § 103.

The rejection further errs on page 8, section 20, in relying on the claimed invention rather than the cited references to find motivation for the proposed modification of *Huang* as follows: "Moreover, in order for the claimed invention to determine the signal domain (i.e. source clock root) of a particular selected cell, a step such as the tracing step (d) or (f) must be performed ... Therefore, sufficient motivation exists ...". Clearly, the rejection relies solely on hindsight gained from Applicant's invention by citing the claimed steps as motivation for the proposed modification of *Huang* by *Nadeau*. Because the rejection relies solely on hindsight gained from Applicant's invention to find motivation for the proposed modification of *Huang* by *Nadeau*, Claims 1 and 10 are not obvious under 35 U.S.C. § 103.

Regarding the rejection of Claims 2 and 11, section 6 of the rejection alleges that *Huang* teaches repeating steps (c), (d), and (e) (now steps (c)-(g)) until every cell belonging to a common signal domain has been inserted in a

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corresponding list of cells for the common signal domain. However, the rejection bases this allegation on the assumption that the repetition of these steps must occur to create the subgroups in *Huang*. However, as explained above, there are other methods of creating subgroups based on source clock roots that do not require the specific steps recited in Claims 2 and 11, and there is no teaching or suggestion in *Huang* that the partitioning of scan cells into subgroups is performed in the specific manner recited in Claims 2 and 11. Because there is no teaching or suggestion in *Huang* that the partitioning of scan cells into subgroups is performed in the specific manner recited in Claims 2 and 11, Claims 2 and 11 are not obvious under 35 U.S.C. § 103.

The rejection of Claims 2, 3, 5-12, and 14-18 is traversed for the same reasons presented above in defense of Claims 1 and 10.

Claims 4 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang, et al., U.S. Patent Application No. 2004/0015803 (*Huang*) in view of Nadeau-Dostie et al., U.S. Patent No. 6,457,161 (*Nadeau*) and further in view of Yoshimoto, U.S. Patent No. 6,877,120. Applicant respectfully traverses the rejection of Claims 4 and 13 for the same reasons presented above in defense of Claims 1 and 10.

Applicant respectfully requests favorable examination and reconsideration of Claims 1-18.

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No additional fee is believed due for this
amendment.

Respectfully submitted,

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